PUZANOVA, LUDMILA

LINC, Rudolf; PUZANOVA, Ludmila; PUZANOV, Alexander

Functional importance of the internal carotid. Rozhl. chir. 35 no.11:685-690 Oct 56.

1. Z anatomickeho ustavu Karlovy university, prednosta prof. L. Borovansky, a Laboratore pro vodni hospodarstvi CSAV, prednosta akad. J. Smetana.
(ARTERIES, CAROTID, physiol.
funct. importance of internal carotid (Cz))

ALESHIN, V.A., kand.tekhn.nauk; PUZANOVA, N.I., inzh.

Elastic and residual deformations of the track in connection with the various methods, areas and degrees of tamping of the ballast cross section. Trudy TSNII MPS no.217:56-70 '61. (MIRA 15:1)
(Ballast (Railroads)) (Strains and stresses)

1. KUZ'MINA, N. A. : PUZANOVA, T. A.

2. USSR (600)

4. Gynecology - Kuybyshev Province

7. Result of work of the Society of Obstetrician-Gynecologists in the construction area of the Kuybyshev hydroelectric power station. Sov. med. 16 no. 10, 1952

9. **Monthly List of Russian Accessions, Library of Congress,** January **1953. Unclassified.**

PUZANOVA, T.A., Cand Med Sci -- (diss) "Blood vessels of benign and malignant uterine tumors and their reactive zones and the nerves of the Brown-Pierce experimental tumor. (Clinical experimental study)." Mos, 1959. 19 pp (Min of Health USSR. Central Inst ~~of~~ for the Advanced Training of Physicians). 200 copies (KL, 39-59, 107)

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PUZANOVA, T.A.; MEL'NIKOVA, L.N.

Dermoid cyst of the ovary complicated by perforation into the bladder. Akush.i gin. no.1:72-73 Ja-F '54. (MLRA 7:6)

1. Iz kliniki akusherstva i ginekologii (zaveduyushchiy kafedroy - professor I.T.Mil'chenko) Kuybyshevskogo meditsinskogo instituta.
(Ovaries--Tumors) (Bladder--Perforation) (Cysts)

PUZANOVA, T.A., assistent

Case of radical surgery in gastric cancer with ovarian
metastases. Akush. i gin. 33 no.1:122 Ja-F '57 (MIRA 10:4)

1. Iz kafedry akusherstva i ginekologii (zav.-prof. I.T.
Mil'chenko) Kuybyshevskogo meditsinskogo instituta na baze
oblastnogo onkologicheskogo dispansera.
(STOMACH NEOPLASMS
metastases to ovaries, radical surg.) (Rus)
(OVARIES, neoplasms
metastatic from stomach, radical surg.) (Rus)

PUZANKOVA, Valentina Dmitriyevna

KHOKHLOV, Nikolay Fedorovich; PUZANKOVA, Valentina Dmitriyevna; CHERNYSHEV, V.I., red.; KHITROV, P.A., tekhn.red.

[Railroad rates in the U.S.S.R.] Zheleznodorozhnye tarify SSSR. Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 55 p. (MIRA 11:2)
(Railroads--Rates)

AGRANAT, G.A., nauchn. sotr.; KUPRIYANOV, A.B., nauchn. sotr.; PUZANOVA, V.F., nauchn. sotr.; SLAVIN, S.V., doktor ekon. nauk, otv. red.; KORMIL'TSOVA, A.A., red.izd-va; MAKUNI, Ye.V., tekhn. red.

[Population and resources of the American North] Naselenie i resursy Amerikanskogo Severa. Moskva, Izd-vo AN SSSR, 1963. 229 p. (MIRA 16:10)
(Canada—Economic geography)
(Alaska—Economic geography)

SLAVIN, S.V., doktor ekon. nauk; GRANIK, G.I., kand. ekon. nauk; LOGINOV, V.P.; MIKHAYLOV, S.V.; SHAPALIN, B.F., kand. geogr. nauk; AVAKYAN, M.I., nauchnyy sotr.; ZAKHAROV, G.A., nauchnyy sotr.; KAMENITSER, L.S., nauchnyy sotr.; TITOVA, N.I., nauchnyy sotr.; TYURDENEV, A.P., nauchnyy sotr.; CHUGUNOV, B.I., starshiy nauchnyy sotr.; KOGAN, I.L.; MESHKOVSKAYA, L.V., starshiy inzh.; LUKIN, I.I.; FAYERSHTEYN, R.I.; Prinimali uchastiye: Agranat, G.A., kand. geogr. nauk, red.; PUZANOVA, V.F., kand. geogr. nauk, red.; KUPRIYANOV, A.B., nauchnyy sotr., red.; SOBOLEV, Yu.A., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.

[Problems in developing the productive forces of Magadan Province] Problemy razvitiia proizvoditel'nykh sil Magadanskoi oblasti. Moskva, Izd-vo Akad. nauk SSSR, 1961. 301 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. 2. Glavnyye inzhenera proyekta "Dal'stroyproyekt" (for Kogan, Fayershteyn). 3. Institut ekonomiki Akademii nauk SSSR (for Chugunov). 4. Energoupravleniye Magadanskogo Soveta narodnogo khozyaystva (for Meshkovskaya). 5. Nachal'nik Oblastnogo otdela po delam stroitel'stva i arkhitektury Magadanskoy oblasti (for Lukin).
(Magadan Province—Industries) (Magadan Province—Economic policy)

AGRANAT, G.A., kand. geogr. nauk, nauchnyy sotr.; KUPRIYANOV, A.B., kand. geogr. nauk, nauchnyy sotr.; PUZANOVA, V.F., kand. geogr. nauk, nauchnyy sotr.; SLAVIN, S.V., doktor ekonom. nauk, otv. red.; BYKOV, I.K., red. izd-va; MAKOGONOVA, I.A., tekhn. red.; GUSEVA, A.P., tekhn. red.

[Industry and transportation in the American North] Promyshlennost' i transport Amerikanskogo Severa. Moskva, Izd-vo Akad. nauk SSSR, 1962. 270 p. (MIRA 15:2)

1. Komissiya po problemam Severa Soveta po izucheniyu proizvoditel'nykh sil (for Agranat, Kupriyanov, Puzanova)
(Alaska--Industry) (Alaska--Transportation)
(Canada--Industry) (Canada--Transportation)

PUZANOVA, V.F.

The gold of Alaska. Let. Sev. 4:176-190 '64. (MIRA 18:3)

1. Sovet po izucheniyu proizvoditel'nykh [illegible] SSSR.

PUZANOVA V. F.

VASYUTIN, V.F., prof., otvetstvennyy red.; SLAVIN, S.V., doktor ekon.nauk, red.; VILENSKIY, M.A., kand.ekon.nauk, red.; PUZANOVA, V.F., nauchnyy sotrudnik, kand.geograficheskikh nauk, red.; SHENKMAN, B.I., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Problems in the development of industry and transportation in Yakutia] Problemy razvitiia promyshlennosti i transporta Iakutskoi ASSR, 1958. 458 p. (MIRA 11:6)

1. Akademiya nauk SSSR. Institut ekonomiki.
(Yakutia--Industries)
(Yakutia--Transportation)

PUZANOVA, V.F.

Mining in northwestern Canada. Probl.Sev. no.1:257-270 '58.
(MIRA 11:12)

1. Sovet po izucheniyu proizvoditel'nykh sil AN SSSR, Sektor Severa.
(Canada--Mines and mineral resources)

SEMENOV, A.I., otv.red.; FILIPPOV, Yu.V., prof., doktor tekhn.nauk, red.; BASHLAVIN, V.A., kand.tekhn.nauk, red.; VOYNOVA, V.V., red.; GURARI, Ye.L., kand.ekonom.nauk, red.; GUREVICH, I.V., red.; ZHIV, I.S., red.; ZARUTSKAYA, I.P., red.; ZASLAVSKIY, I.I., red.; KOZLOV, F.M., red.; NIKISHOV, M.I., kand.geograf.nauk, red.; SADCHIKOV, S.F., red.; TIKHOMIROV, D.I.; red.; TUTOCHKINA, V.A., red.; BALANTSEVA, I.A., red.kart; BOGDANOVA, L.A., red.kart; BOCHAROVA, I.L., red.kart; VENEVTSEVA, G.P., red.kart; VOLKOVA, A.P., red.kart; GOSTEVA, N.A., red.kart; YEFIMOVA, G.N., red.kart; ZHIV, D.I., red.kart; KRAVCHENKO, A.V., red.kart; KUBRIKOVA, N.S., red.kart; KUZNETSOVA, N.A., red.kart; KURSAKOVA, I.V., red.kart; LOBZOVA, N.A., red.kart; MERTSALOVA, L.M., red.kart; MOSTMAN, S.L., red.kart; PANFILOVA, M.V., red.kart; SEMENOVA, V.D., red.kart; SMIRNOVA, T.N., red.kart; TERESHKOVA, V.S., red.kart; FEDOROVSKAYA, G.P., red.kart; FETISOVA, N.P., red.kart; FIL'GUS, Z.Kh., red.kart; SHAPIRO, Ye.M., red.kart; SHISHKIN, Ye.A., red.kart; YASHUNICHKINA, Ye.G., red.kart. V razrabotke kart prinimali uchastiye: ALISOV, B.A., prof.; BERZINA, M.Ya.; VASILEVSKIY, L.I.; GAVRILOVA, S.A., kand.geograf.nauk; GINZBURG, G.A., kand.tekhn.nauk; DOBOSHINSKAYA, I.B.; YEVSTIGNEYEVA, A.I.; LAVRENKO, Ye.M., prof.; LOZINOVA, V.M., kand.tekhn.nauk; MILANOVSKIY, Ye.Ye., kand.geologo-mineral.nauk; MIKHAYLOV, A.A., prof.; MYSHKIN, Ye.P.; PUZANOVA, V.F., kand.geograf.nauk;

(Continued on next card)

SEMENOV, A.I.---(continued) Card 2.
ROZOV, N.N., prof.; SMIRNOV, D.I.; TARASOV, A.P.; TROFIMOVSKAYA, Ye.A., kand.geograf.nauk; TUGOLESOV, D.A., kand.geologo-mineral. nauk. ZININ, I.F., tekhn.red.

[Geographical atlas for secondary school teachers] Geograficheskii atlas; dlia uchitelei srednei shkoly. Izd.2. Moskva, Glav.upr. geodezii i kartografii MVD SSSR, 1959. 191 p. (MIRA 12:11)

1. Predstavitel' Nauchno-issledovatel'skogo instituta metodov obucheniya Akademii pedagogicheskikh nauk RSFSR (for Zaslavskiy). 2. Predstavitel' Upravleniya shkol Ministerstva prosvyashcheniya RSFSR (for Tutochkina). 3. Chleny-korrespondenty AN SSSR (for Lavrenko, Mikhaylov).

(Maps)

AGRANAT, G.A., kand. geogr. nauk, nauchnyy sotr.; PUZANOVA, V.F., kand. geogr. nauk, nauchnyy sotr.; SLAVIN, S.V., doktor ekon. nauk, otv. red.; BYKOV, I.K., red.izd-va; YEGOROVA, N.F., tekhn. red.

[Power resources, agriculture and industries of the American North]Energetika, sel'skoe i promyslovoe khoziaistvo Amerikanskogo Severa. Moskva, Izd-vo Akad. nauk SSSR, 1962. 183 p. (MIRA 15:11)

1. Komissiya po problemam Severa Soveta po izucheniyu proizvoditel'nykh sil Gosudarstvennogo nauchno-ekonomicheskogo soveta Soveta Ministrov SSSR (for Agranat, Fuzanova)
(North America--Power resources) (North America--Industries)
(North America--Agriculture)

AGRANAT, G.A., nauchnyy sotrudnik; KUPRIYANOV, A.B., nauchnyy sotrudnik;
PUZANOVA, V.F., nauchnyy sotrudnik

Alaska, the 49th state of the U.S. (from foreign sources). Let.
Sev. 3:257-258 '62. (MIRA 15:8)

1. Sovet po izucheniyu proizvoditel'nykh sil pri Prezidiume
AN SSSR.
(Alaska--History)

SLAVIN, S.V., doktor ekonom.nauk; **GRANIK**, G.I., kand.ekonom.nauk; **KUZAKOV**, K.G., kand.ekonom.nauk; **MIKHAYLOV**, S.V., kand.ekonom.nauk; **SHAPALIN**, B.F., kand.geograf.nauk; **KAMENITSER**, L.S., nauchnyy sotrudnik; MOSKVIN, D.D., nauchnyy sotrudnik; **TYURDENEV**, A.P., nauchnyy sotrudnik; LEDENTSOVA, N.A., inzh.; **KOZLOV**, B.K., kand.tekhn.nauk, starshiy nauchnyy sotrudnik; **BRONSHTEYN**, L.B., starshiy nauchnyy sotrudnik; BOVKUN, A.Ye.; **VERSHININ**, A.A., okhotoved; **SERGEYEV**, M.A., retsenzent; AGRANAT, G.A., kand.geograf.nauk, red.; **PUZANOVA**, V.F., kand.geograf.nauk; SHENKMAN, V.I., red.izd-va; BRUZGUL', V.V., tekhn.red.

[Problems in the development of the productive forces of Kamchatka Province] Problemy razvitiia proizvoditel'nykh sil Kamchatskoi oblasti. Moskva, 1960. 420 p. (MIRA 13:7)

1. Akademiya nauk SSSR. Sovet po izucheniyu proizvoditel'nykh sil. Sektor prirodnykh resursov i ekonomiki Severa. 2. Zaveduyushchiy Sektorom prirodnykh resursov i ekonomiki Severa Soveta po izucheniyu proizvoditel'nykh sil AN SSSR (for Slavin). 3. Institut energetiki AN SSSR (for Kozlov). 4. Tikhookeanskiy rybnyy institut (TINRO) (for Bronshteyn). 5. Starshiy ekonomist Kamchatskogo oblplana (for Bovkun). 6. Kamchatskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo instituta zhivotnogo syr'ya i pushniny (for Vershinin).

(Kamchatka Province--Economic conditions)

FUZANOVA, V. P.

25623 FUZANOVA, V. P.

K voprosy o tekhnologichnosti detaley. V sb: Nekotoryye voprosy tekhnologii mashiostroeniya. M—L., 1948, s. 100 - 04.

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

PUZANOVA, V. P. and ALEKSEEV, N. N.

Razmery i dopuski v mashinostroenii. Moskva, Mashgiz, 1948. 151 p. diagrs. (Tekhnologiia mashinostroeniia: Vzaimozameniaemost' i izmereniia v mashinostroenii)

DLC: TJ233.A4

Dimensions and tolerances in machine-building.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

PUZANOVA, V. P.

Puzanova, V. P. (Leningrad). Some Problems in Constructing Dimension-chain and Dimensioning Parts on Drawings P. 53

Interchangeability, Accuracy and Measuring Methods in Machine Building, Moscow, Mashgiz, 1958, 251 pp. (Sbornik Nauchno-tekh. obshch. mashinostroitel'noy promyshlennosti, Leningradskoye oblast pravleniya, kn. 47).

This collection of articles deals with the topics discussed at the 3rd Leningrad Sci. and Engineering Conference on Interchangeability, accuracy and Inspection Methods in Machine-building and Instrument-making, held 18-22 Mar 1957.

PUZANOVA, V.P., kand.tekhn.nauk (Leningrad)

Problems in plotting dimensional connections and dimensioning drawings of machine parts. [Izd.] LONITOMASH 47:53-59 '58. (MIRA 11:10)
(Mechanical drawing)

PUZANOVA, Varvara Petrovna, kand.tekhn.nauk; MAKHROVSKIY, V.G., doktor
tekhn.nauk, prof., retsenzent; IZHEVSKIY, M.N., inzh., red.;
CHFAS, M.A., red.izd-va; SOKOLOVA, L.V., tekhn.red.

[Dimensional analysis and application of dimensions to working
drawings] Razmernyi analiz i prostanovka razmerov v rabochikh
chertezhakh. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.
lit-ry, 1958. 195 p. (MIRA 11:5)
(Mechanical drawing)

PUZANOVA, V.P.

Indicating the dimensions of length on a mechanical drawing of parts.
Standartizatsiia 26 no.7:15-18 Jl '62. (MIRA 15:7)
(Mechanical drawing)

PUZANOVA, V.P., kand. tekhn. nauk [deceased]; BRUK, S.I., kand. tekhn. nauk, retsenzent

[Indication of length dimensions on part drawings] Prostanovka razmerov dliny v chertezhakh detalei. Moskva, Mashinostroenie, 1964. 103 p. (MIRA 17:6)

PUZANOVA, V.P., inzhener.

Analysis of the defects in setting up parts to be machined in machine-tool devices. [Izd] LONITOMASH 25:87-100 '52. (MLRA 8:2)
(Machine tools)

MALYSHEV, S. I., RUZANOVA-MALYSHEVA, E. V.

Sawflies

Inquilinism of sawflies (Hymenoptera, Tenthredinidae) in experimental conditions. Trudy Len. ob-va est. 71, No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress June 1953. UNCL.

PUZANOVA-MALYSHEVA, E.V.

USSR / General and Special Zoology. Insects

P

Abs Jour: Ref Zhur-Biol., No 1, 1958, 2263

Author : E. V. Puzanova-Malysheva
Inst :
Title : The Conduct of the Scarab-Scarabaeus sacer L. (Coleoptera, Scarabaeidae).

Orig Pub: Tr. Vses. entomol. o-va, 1956, 45, 51-71

Abstract: The conduct of Sc. sacer was observed in nature (at the Khoperskiy park) and in the laboratory. The size of the balls manufactured by the scarabs vary from 8 to 67 grams. The additional increase or decrease in the sizes of the balls already completed, are noted. The fastening of the balls with pins lead the scarabs to free the balls in one manner or another: by pulling away the ball together with the pin, by breaking up the ball into two halves and subsequently

Card 1/2

USSR / General and Special Zoology. Insects P

Abs Jour: Ref Zhur-Biol., No 1, 1958, 2263

Abstract: uniting them again, and so on. The scarabs easily take over balls which were artificially deformed or cut, and give them again a rounded form. The scarabs make three types of burrows: "dinning room," "nursery" in which the dung is given a pear shape form, and a hibernacle passage going into a depth up to 2 meters. The important role of scarabs in the enrichment of poor, sandy soils with organic matter is noted. The conduct of scarabs is very plastic. It usually appears in 4 successive stages: the preparation of the ball, the rolling, the burial and the consumption, but under the influence of outside circumstances, this scheme of things may become complicated or simplified.

Card 2/2

KHTSENSKIY, S.D.; PUZATOV, K.K.

Mechanized breaking-off of ladle linings. Metallurg no.9:37 S '56.
(MLRA 9:10)

1.Martenovskiy tsekh no.3 metallurgicheskogo zavoda imeni Dzerzhinskogo.
(Open-hearth furnaces--Equipment and supplies)

PUZATOV, Ye. S.

Efficiency promotion at the Komintern Plant in Dnepropetrovsk.
Met. i gornorud. prom. no.1:76-77 Ja-F '63.
(MIRA 16:4)

(Dnepropetrovsk--Iron and steel plants--Technological innovations)

PUZATOV, Ye.S.

Mechanized sheet transfer in galvanizing. Metallurg 8 no.6: 31-32 Je '63. (MIRA 16:7)

1. Metallurgicheskiy zavod imeni Kominterna.
(Galvanizing) (Materials handling)

PUZDERIE, Nocolae

For a perfect knowledge of laws. Munca sindic 6 no.5:54-56 My '62.

1. Presedinte al comitetului sindicatului Intreprinderea pentru comertul cu ridicata de produse alimentare, Bucuresti.

PUZDRAKIEWICZ, Zdzislaw, inz.

Center for engineering and technological calculations of the Association of Design Offices of the Building Industry. Inz i bud 21 no.5:149-152 My '64.

1. Center for Engineering and Technological Calculations, Warsaw.

Pu DRENKOVA, I.V.

15

USSR.

Methylglyoxime and methylethylglyoxime in the determination of nickel. V. M. Peshkova, E. A. Gribova, I. I. Nazarenko, and I. V. Puzdrenkova. *Vestnik Moskov. Univ.* 7, No. 9; *Ser. Fiz.-Mat. i Estestven. Nauk* No. 6, 49-58(1952).—Methylglyoxime (I) can be used in the gravimetric detn. of Ni in the pH range 7.4-9.1; also colorimetrically, alone, or in the presence of Co, following a room-temp. C_6H_6 extn. of the Ni complex at pH 9.2-10.6. HON:CMeCEt:NOH is suitable for the gravimetric Ni detn. at pH 5.8-9.8, alone or in the presence of Fe, Al, Cr; colorimetrically it can be used as I. Gerard Aufleger

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PUZDRENKOVA, I. V.

8 ④ Chem

Analytical Abs
Vol. 1 No.
Mar. 1954
Inorganic An

487. **α-Furildioxime as a reagent for gravimetric and colorimetric determination of nickel.** V. M. Peshkova, G. A. Goncharova, E. A. Gribova and I. V. Puzdrenkova (*J. Anal. Chem., U.S.S.R.*, 1953, **8** [2], 114–118).—α-Furildioxime is suitable for microgravimetric determinations of Ni, *e.g.*, for 0·5 mg of Ni in 50 ml of soln. The pH for quant. pptn. is in the range 6·4 to 10·5. In presence of tartrate Fe and Al do not interfere at concn. up to 100 times that of the Ni. Colorimetric determinations can be carried out with chloroform or benzene extracts of the complex from soln. of pH 7·3 to 8·4.

G. S. Smith

5(2)

AUTHORS: Puzdrenkova, I.V., Alimarin, I.P., and Frolkina, V.A. SOV/55-58-2-24/35

TITLE: Determination of Cerium by Means of Potassiumperiodate (Opredeleniye tseriya periodatom kaliya)

PERIODICAL: Vestnik Moskovskogo Universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 2, pp 183-186 (USSR)

ABSTRACT: The authors investigated the interaction of the 3- and 4-valent cerium with potassiumperiodate in an acid medium. The periodation often appeared in the form JO_6^{-5}.

The authors developed methods for the determination of cerium in salts and sand with the aid of potassiumperiodate. They used gravimetric as well as calorimetric methods. There are 11 references, 5 of which are Soviet, 2 Indian, 1 Finnish, 1 German, 1 American, and 1 Swedish.

ASSOCIATION: Kafedra analiticheskoy khimii (Chair of Analytic Chemistry)

SUBMITTED: April 20, 1957

Card 1/1

PUZDRENKOVA, I.V.

PUZDRENKOWA, I.; Jen-Yun, E.; Alimarin, I.

Utilization of periodic acid for the quantitative determination of some rare metals. In Russian. p. 244.

CHEMIA ANALITYCZNA. (Komisja Analitycsna Polaskiej Akademii Nauk i Naczelan Organizacja Techniczna) Warszawa, Poland, Vol. 3, no. 3/4 1958

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

SOV/137-59-1-2197

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 289 (USSR)

AUTHORS: Alimarin, I. P., Przheval'skiy, Ye. S., Puzdrenkova, I. V., Golovina, A. P.

TITLE: Study of the Absorption Spectra of Oxyquinolinates of Some Rare Elements (Izucheniye spektrov pogloshcheniya oksikhinolinatov nekotorykh redkikh elementov)

PERIODICAL: Tr. Komis. po analit. khimii AN SSSR, 1958, Vol 8 (11), pp 152-160

ABSTRACT: The authors examined the relationship between the oxyquinolinates (I) of Ce^{3+}, Ce^{4+}, Ti^{4+}, Zr^{4+}, Th^{4+}, and Ta^{5+} and organic solvents. 1 mg/cc solutions of the metals were used for this work. It was established that I of metal are extractable with chloroform (II) at various pH; thus, Ti I is extracted at 1.5-2.5; Ce^{4+} I at 9.9-10.6; Zr I, Th I, and U I at 4.6; Nb I at 6-9; and Ta I at 6-7 pH. Maximum light absorptions of I of metals are the following (in mμ): Zr 393, Th and Ce^{3+} 383, Ti 385-400, Nb 385-389, Ta 388, and Ce^{4+} 495. A method was developed for absorptiometric determination of Ce I in the presence of Th, La, Nd, Pr, and Ti. It was established

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that the organic solvents can be arranged into the following sequence according to the intensity of the color of Ce I dissolved in them: $CCl_4 < C_6H_6 < C_2H_2Cl_2 <$ $< CHCl_3$. The acid solution of Ce salt (20 - 300 γ Ce in 10 cc) is placed in a separating funnel, 1 cc of 1% alcoholic oxine solution and 2-3 drops of phenolphthalein are added, it is alkalized with concentrated NH_4OH to a pink color, and 1-1.5 cc excess of 5% NH_4OH is added (pH of the solution is 9.9-10.6). Ce I formed is removed by a double extraction with 5 cc II each. Extraction time is 5 min. The absorptiometric determination is performed at 495 mμ. The sensitivity is 1 γ/cc Ce. The solutions follow the Bouguer-Lambert-Beer law in the concentration range of 20-300 γ Ce. Sodium-versenate solution is added in the presence of Ti. The completeness of extraction was verified with the aid of Ce^{141} [C^{141} in Russian text. Trans.Note] radioactive isotope.

Z. G.

5(2)

AUTHORS: Alimarin, I. P., Ts'eng Yün-e, Pazdrenkova, I. V. SOV/55-58-6-25/31

TITLE: Use of Periodic Acid for the Quantitative Determination of Some Rare Elements (Primeneniye yodnoy kisloty dlya kolichestvennogo opredeleniya nekotorykh redkikh elementov)

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 6, pp 201 - 206 (USSR)

ABSTRACT: Hitherto not all properties of the periodic acid were known in its aspect as an analytical reagent. This paper reveals some new data on the use of periodic acid for the quantitative determination of some rare elements. One of the tables contains the results of an earlier investigation, concerning the precipitation reaction in a neutral or slightly acid medium under the action of potassium periodate (Ref 1). A short description then follows of the method introduced by the authors for determining cerium, zirconium, thorium, thallium and antimony. For the determination of cerium a precipitation reaction was employed, described already in the year 1874 in paper Ref 7. According to this method the trivalent cerium is oxidized into the quadrivalent cerium by means of potassium periodate, the quadrivalent cerium forming with the periodate a precipitate in an acid medium. The composition of that

Card 1/3

Use of Periodic Acid for the Quantitative Determination of Some Rare Elements SOV/55-58-6-25/31

substance, when dried in air, was found to be $CeHJO_6 \cdot 3H_2O$, and after being dried at 120°, was found to be $CeHJO_6$. The determination of the cerium according to a weight- and colorimetrical method in the presence of great quantities of rare earth elements was successful, the error amounting only to ± 1.25%. Zirconium and thorium were determined amperometrically. The most favorable conditions for the determination of zirconium were found at a pH-value of 2.5 and with a voltage of the saturated calomel electrode of -1.0 v, whilst the respective values for thorium were pH 2.5 and 0.8 v. The results of the determination are shown in tables 2 and 3. Zr could only be determined by way of indirect titration, i.e. titration of the excess of potassium periodate. Thallium was determined once potentiometrically with potassium-periodate. The potentiometrical titration was carried out in the presence of 6-9n hydrochloric acid. The respective data are compiled in table 4. Furthermore complex compounds of the periodic acid have been employed for the determination of thallium and antimony viz. $K_7\,Cu(JO_6)_2$ in a basic medium (data in tables 5 and 6), in which connection it should be mentioned that the rare earth elements will form complex compounds

Card 2/3

Use of Periodic Acid for the Quantitative Determination of SOV/55-58-6-25/31
Some Rare Elements

with potassium periodate in a basic medium, a fact which can be made use of for their analytical determination and separation. There are 1 figure, 6 tables, and 12 references, 7 of which are Soviet.

ASSOCIATION: Kafedra analiticheskoy khimii (Chair for Analytical Chemistry)

SUBMITTED: June 25, 1958

Card 3/3

ALIMARIN, I.P.;GOLOVINA, A.P.;PUZDRENKOVA, I.V.

Studying absorption spectra of hydroxyquinolates of some rare
elements. Part 2: Photometric determination of titanium. Vest
Mosk. un. Ser. mat., mekh. astron., fiz., khim. 14 no.2:185-188
'59 (MIRA 13:3)

1. Kafreda analiticheskoy khimii Moskovskogo gosuniversiteta.
(Titanium--Analysis) (Rare earth compounds)

ALIMARIN, I.P.;PUZDRENKOVA, I.V.

Periodate complex compounds of rare earth elements. Vest Mosk. un. Ser. mat., mekh., astron., fiz., khim. 14 no.2:213-216 '59
(MIRA 13:3)

1. Kafedra analiticheskoy khimii Moskovskogo gosuniversiteta.
(Rare earth elements) (Periodates)

S/075/62/017/006/003/004
I032/I230

AUTHORS: Alimarin, I.P., Puzdrenkova, I.V., and Dolnikova, S.Ya.

TITLE: Purpurogallin as a reagent for the spectrophotometric determination of zirconium.

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no.6, 1962, 700-703

TEXT: The absorption spectra of solutions of purpurogallin in aqueous dioxan at various pH's are given. K_{dissoc} of purpurogallin has been determined at the ionic strength of 0.1; pK was found to be 6.35 ± 0.25. It was found that purpurogallin gives colored complex compounds with beryllium, gallium, indium, titanium, zirconium, scandium and rare earth elements. With zirconium, purpurogallin gives a complex compound that is soluble in an acid medium and has an absorp-

Card 1/3

S/075/62/017/006/003/004
I032/I232

Purpurogallin as a reagent...

tion maximum at 330 mμ, with an apparent extinction coefficient of 33000 - 34000. A method has been worked out for the determination of zirconium at concentrations as low as 0.09 γ/ml, in the presence of iron at a concentration not exceeding 50 times that of zirconium. There are 5 figures and 1 table. The English language references read: Evans, T.W., Dehn, W.M., Jour. Amer. Chem. Soc. 52, 3647 (1930). Ramano Rao, D.V., Guva Sirkar, S.S., Jour. and Proc. Instn. Chemists 28, 238 (1956). Wannagat, U., Bull. Soc. chim. France 5, 307 (1954). Tchakirian, Ar., Bevillard, P., Compt. rend. 233, 256, 1112 (1951). Bevillard, P., Mikrochim. 39, 209 (1952). Connick, R.E., McVey, W.H., Jour. Amer. Chem. Soc. 71, 3182 (1949). Connick, R.E., Reas, W.H., Jour. Amer. Chem. Soc. 73, 1171 (1951). Milner, G.W.C., Edwards, J.W., Analyst 85, 86 (1960).

ASSOCIATION: Moskovskiy gosudarstvenny universitet im. M.V. Lomonosova (M.V. Lomonosov Moscow State University)

Card 2/3

S/075/62/017/006/003/004
I032/I232

Purpurogallin as a reagent...

SUBMITTED: July 3, 1961

Card 3/3

L 16086-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG

ACCESSION NR: AP4046455 S/0078/64/009/010/2475/2480

AUTHOR: Alimarin, I. P.; Sherif Abdel' Khamid; Puzdrenkova, I. V.

TITLE: Extraction of gallium N-benzoylphenylhydroxylaminate

21

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 10, 1964, 2475-2480

TOPIC TAGS: gallium, extraction, complexing, diethyl ether extractant, complexing agent, gallium element separation

ABSTRACT: The extraction of gallium N-benzoylphenylhydroxylaminate (Ga-BPHA) under different conditions, including the presence of complex-forming

solutions by the BPHA in the organic solvents, the extraction curves showed

Card 1/3

L 16086-65

ACCESSION NR: AP4046455

minima (of about 40% extraction) in the pH 3-7 region. The Ga-BPHA complex was also extracted from strong acids. The effects of acidity (20-24 NH_2SO_4 optimum), solvent (chloroform better than benzene), and BPHA concentration on figures

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 04Nov63 ENCL: 01

SUB CODE: GC NO REF SOV: 011 OTHER: 005

Card 2/3

Card 3/3

ALIMARIN, I.P.; SHERIF ABDEL' KHAMID; PUZDRENKOVA, I.V.

Hydrolysis constants and complex formations of Ga^{3+} with N-benzoylphenylhydroxylamine. Zhur. neorg. khim. 10 no.2: 389-393 F '65. (MIRA 18:11)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra analiticheskoy khimii. Submitted March 13, 1964.

SHERIF ABDEL' KHAMID; ALIMARIN, I.P.; PUZDRENKOVA, I.V.

Determination of the constants of hydrolysis and of complex formation of In^{3+} by the N-benzoylphenylhydroxylamine method of extraction. Vest.Mosk.un.Ser.2:Khim. 20 no.3:71-75 My-Je '65. (MIRA 18:8)

1. Kafedra analiticheskoy khimii Moskovskogo universiteta.

L 63793-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACCESSION NR: AP5018758

UR/0075/65/020/007/0894/0895
543.70

AUTHOR: Sherif Abdel' Khamid; Alimarin, I. P.; Puzdrenkova, I. V.
55 55 55

20
18
B

TITLE: Extractive separation of gallium from indium by means of cupferron
55 27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 7, 1965, 894-895

TOPIC TAGS: gallium extraction, indium extraction, cupferron

ABSTRACT: A comparison of the extraction curves of gallium and indium cupferronate and N-benzoylphenylhydroxylaminate showed cupferron to be more suitable for the separation of these two elements. Cupferron was added to a mixture of gallium and indium acid containing a

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L 63793-65

ACCESSION NR: AP5018758

sufficient amount of cupferron. Orig. art. has: 2 figures and 1 table.

2

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

55

SUBMITTED: 12Jun64 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 005 OTHER: 002

Card 2/2

DEMIDENKO, Yu.B.; PUZDROVSKIY, Ye.P.

Detailed seismic studies of salt domes in the Dnieper-Donets Lowland. Razved.i prom.geofiz. no.45:3-16 '62. (MIRA 15:11)
(Dnieper-Donets Lowland--Salt domes) (Seismic prospecting)

[illegible] AT60[illegible]560 (A) SOURCE CODE: UR/3169/65/000/003/0094/0098

27

AUTHOR: Puzdrovskiy, Ye. P.

ORG: Poltava Geophysical Expedition (Poltavskaya geofizicheskaya ekspeditsiya)

TITLE: Construction of structural plans by processing longitudinal and non-longitudinal correlation refracted wave method profiles

SOURCE: AN UkrSSR. Geofizicheskiy sbornik, no. 3(14), 1965. Stroyeniye neftegazonosnykh provintsiy po geofizicheskim dannym (The structure of oil and gas yielding provinces according to geophysical data), 94-98

TOPIC TAGS: seismology, gravimetric survey, geologic exploration, correlation function, hodograph

ABSTRACT: An analysis of methods which can be used to increase the effectiveness of correlation refracted wave method investigations such as the tracking of boundary region disruptions in the crystalline fundament which separates the lateral portions of a depression from a graben is made. Seismograms are used to determine the location of a regional dislocation and, on the basis of gravimetric investigations, the line of the dislocation is traced. Non-longitudinal refracted wave correlation method profiles are traced across this line every 1.5 - 3.0 km, using 3-4 explosion points located on different sides of the profiles. Regional dislocations are usually determined by a sharp attenuation of waves corresponding to the surface of the

Card 1/2

ACC NR: AT6025360

crystalline fundament, by the presence of diffracted waves, by a change in recording form, etc. These locations are entered on the profile and are used to trace the dislocation. Quantitative interpretation is not performed. A method is also described for producing some information concerning the depth of the crystalline fundament. To do this, the explosion points are placed on a single line intersecting the non-longitudinal profiles. This line is then used in constructing the refracting boundary. A ray diagram is used to construct the seismic section from the overall hodograph along this single line. The usage of non-longitudinal profiles makes it possible to perform structural constructions of horizons from which no reflections were produced with minimum effort. Orig. art. has: 2 figures.

SUB CODE: 08 / SUBM DATE: 02 Apr 64 / ORIG REF: 003

PUZDUGAN, G.

New methods for examination of materials and manufactured items. p. 80.

METALURGIA SI CONSTRUCTIA DE MASINI

Vol. 8, no. 1, Jan. 1956

Rumania

Source: EAST EUROPEAN LISTS Vol. 5, no. 10 Oct. 1956

PUZENKO, A.

We are ready for the opening of the navigation season. Rech. transp 21 no.4:45 Ap '62. (MIRA 15:4)

1. Kapitan teplokhoda "Mechnikov" Amurskogo parokhodstva.
(Ships--Maintenance and repair)

BUTSKIY, A.L.; DVERIY, V.P.; PANKOV, K.A.; PUZENKO, N.N.

Jet bits as a potential for increasing the footage of oil and
gas wells in the Dnieper-Donets Lowland. Neft. i gaz. prom.
no.4:18-19 O-D '64 (MIRA 18:2)

DVERIY, V.P.; PUZENKO, N.N.

Cement muds of reduced density for the geological conditions governing the Dnieper-Donets Lowland. Neft. i gaz. prom. no.2:25-27 Ap-Je '64. (MIRA 17:9)

PUZENKOVA, A.

Multiply the ranks of participants in the communist labor movement. Fin. SSSR 37 no.5:18-22 My '63. (MIRA 16:5)

1. Sekretar' TSentral'nogo komiteta professional'nogo soyuza rabotnikov gosudarstvennykh uchrezhdeniy.
(Finance) (Socialist competition)

PUZENKOVA, A.I., deputat

Encourage the adoption of new forms of service. Gor.khoz.Mosk.
36 no.6:43-44 Je '62. (MIRA 15:8)

1. Predsedatel' Postoyannoy komissii kommunal'no-bytovogo
obsluzhivaniya Sverdlovskogo rayonnogo soveta Moskvy.
(Moscow—Municipal services)

NAZARETYAN, Ye.L.; ANAN'YEV, V.A.; PUZENKOVA, Ye.N.

Activity of aldolase and the heterohemagglutination reaction in Botkin's disease. Sov.med. 20 no.5:66-71 My '56. (MLRA 9:9)

1. Iz laboratorii deystvitel'nogo chlena Akademii meditsinskikh nauk SSSR prof. Ye.M.Tareyeva i Instituta virusologii Akademii meditsinskikh nauk SSSR.

(HEPATITIS, INFECTIOUS, blood in,
aldolase & hemagglut. (Rus))
(DESMOLASES,
aldolase in blood in infect. hepatitis (Rus))
(BLOOD,
aldolase in infect. hepatitis (Rus))
(AGGLUTINATION, in various diseases,
infect. hepatitis (Rus))

ACC NR: AP6024023 SOURCE CODE: UR/0062/66/000/006/1115/1116

AUTHOR: Knunyants, I. L.; Puzerauskas, A. P.; Kil'disheva, O. V.; Pervova, Ye. Ya.

ORG: Institute of Heteroorganic Compounds, Academy of Sciences, SSSR (Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Symmetrical diethyl di-p-nitrophenyl 1,2-ethylenediphosphonate

SOURCE: AN SSSR. Izv. Ser khim, no. 6, 1966, 1115-1116

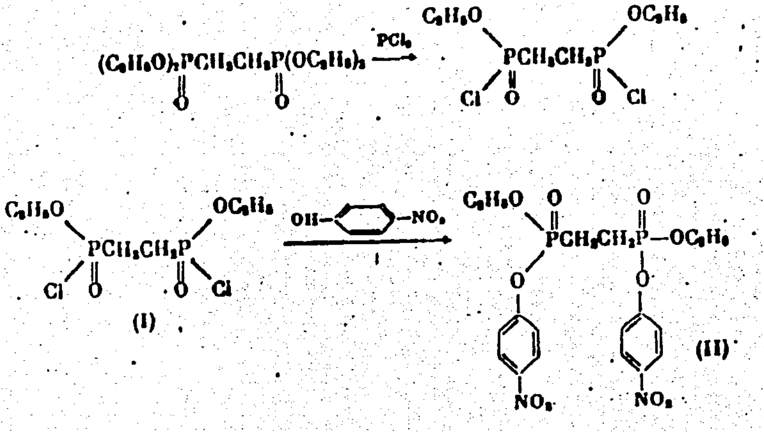
TOPIC TAGS: antitumorigenic compound, alkylnitrophenyl diphosphonate, ORGANIC SYNTHETIC PROCESS, ETHYLENE, DIPHENYL COMPOUND, CYCLIC GROUP

ABSTRACT:

Previous studies showed that some bisethyleneimines possess antitumorigenic properties; in this connection, preparation of symmetrical diethyl di-p-nitrophenyl 1,2-ethylenediphosphonate (II) was studied. At 68—70°C, tetraethyl 1,2-ethylenediphosphonate reacts with PCl_5 to form chloride I, which reacts with p-nitrophenol in the presence of triethylamine at -10°C to yield (72%) II, mp 96—104°C:

Card 1/3 UDC: 542.95+661.718.1

ACC NR: AP6024023



II is a bifunctional phosphorylating agent. The reaction of I and II with cyclohexyamine yields symmetrical diethyl dicyclohexylamido-1,2-ethylenediphosphonate, mp 211—214°C:

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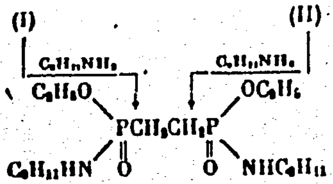
ACC NR: AP6024023



[W.A. 50; CBE No. 10]

SUB CODE: 07/ SUBM DATE: 28Jan66/ ORIG REF: 001/

Card 3/3

PUZEVSKAYA, R. M.

Dissertation: "Preservation of Normal Erythrocytes and Their Use in Determining the Isoserological Properties of Blood." Cand Biol Sci, Belorussian State U, Minsk, 1954. (Referativnyy Zhurnal--Khimiya, Moscow, No 10, May 54)

SO: SUM 318, 23 Dec 1954

PUZEVSKAYA, R.M.

Production and use of specific predipitating animal serum for detecting Rh antibodies in human blood. Probl.gemat.i perel. krovi no.11:38-41 '62. (MIRA 15:11)

1. Iz Yuzhno-Sakhalinskogo gosudarstvennogo pedagogicheskogo instituta.
(RH FACTOR) (SERUM DIAGNOSIS)

L 61740-65 EWT(d) IJP(c)

ACCESSION NR: AP5016904 PO/0097/65/006/001/0111/0122

AUTHORS: Pelzner, E. (Warsaw); Puzewicz, Z. (Warsaw) 13

B

TITLE: The Helmholtz equation in a cylindrical region 16

SOURCE: Proceedings of vibration problems, v. 6, no. 1, 1965, 111-122

TOPIC TAGS: differential equation, Dirichlet problem, transmission line, Fredholm equation, asymptotic property

ABSTRACT: Assuming a region sufficiently regular for application of Green's theorem, the authors treat the Neumann and Dirichlet problems for the Helmholtz

$$\nabla_z^2 u + k^2 u = -f(x, z), \quad (1)$$

in two parts. First they reduce the problem to the solution of a Fredholm integral equation which they solve formally. Then they treat the asymptotic behavior of the solution at infinity in the Lighthill sense of distributions and prove a uniqueness theorem for real wave numbers corresponding to a lossless medium. Orig. art. has: 62 formulas.

ASSOCIATION: none

Card 1/2

L 61740-65

ACCESSION NR: AP5016904

SUBMITTED: 09Jul63 ENCL: 00 SUB CODE: MA

NO REF SOV: 001 OTHER: 004

Card 2/2 dap

PUZEY, I. M.

"Energy Anisotropy of Solid Solutions of Nonferromagnetic Elements in Nickel." Sub 9 Apr 47, Moscow Order of Lenin State U imeni M. V. Lomonosov

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

USSR/Physics
Anisotropy
Ferromagnetism

Sep/Oct 1947

3

"The Anisotropic Energy of Ferromagnetic Crystals of Binary Alloys," N. S. Akulov, I. M. Puzey, Scientific Research Institute of Physics, Moscow State University, 6 pp

"Izv Ak Nauk, Ser Fizich" Vol XI, No 5

The purpose of the article is to promulgate the data which was obtained as a result of the systematic study of parameter K_1 of magnetic anisotropy for binary alloys of Ni with nonferromagnetic impurities of various valencies, i.e., Cu, Sn, and Mo. Discusses the

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USSR/Physics (Contd)

Sep/Oct 1947

general objectives of the investigations which were conducted and lists the results obtained from the measurements which were conducted to determine saturation.

PUZEY, I. M.

USSR/Physics
Magnetism
Solenoids

Feb 49

"Solenoid With a Strong Magnetic Field," I. M. Puzey, 7 pp

"Zavod Lab" Vol XV, No 2

Accurate measurement of the magnetic properties of pure ferromagnetic metals and alloys requires very strong magnetic fields. Usually, in laboratory practice, a solenoid capable of creating a field of 1,000, and in rare cases 3,000 oersteds is used. Puzey claims discovery of a simple device making it

[redacted] 54/49T104

USSR/Physics (Contd) Feb 49

possible to obtain fields of 7,300 oersteds using a 110-volt power supply, and as high as 14,000 oersteds using a 220-volt power supply. Describes circuit and methods for keeping the equipment cool.

[redacted] 54/49T104

PA 46/49T108

USSR/Physics
Magnetism
Nickel Alloys

Jun 49

"Magnetic Anisotropy of Binary Alloys With a Nickel Base," I. M. Puzey, 8 pp

"Zhur Tekh Fiz" Vol XIX, No 6

Used law of approach to saturation to measure constant of anisotropy K_1 for polycrystals of Ni-Cu and Ni-Mo alloys as a function of: concentration, temperature, and type of admixture. Course of temperature dependence of constant K_1 in Ni-Cu alloys in the first approximation does not depend

upon Cu concentration. At T = -183° C, K_1 decreases very rapidly with decrease in concentration even at very small concentrations, and much more rapidly in Ni-Mo alloys than in Ni-Cu alloys. Shows that K_1 for Ni-Cu and Ni-Mo alloys is a function of saturation at low temperatures. K_1 is a function of the number of electrons introduced by atoms of the admixture, and does not depend upon nature of admixture (Cu, Mo). Submitted 18 Jun 48.

46/49T108

PUZEY, I. M.

Electromagnetism

Constant of magnetic anisotrophy of alloys in the permalloy calss. Izv. AN SSSR. Ser. fiz. 16 NO. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

PUZEY, I. M. (Moscow)

"The Temperature Dependence of the Magnetic Anistropic Energy," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 23-31 May 56.

Puzey, I. M,

137-58-1-1549

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 207 (USSR)

AUTHOR: Puzey, I. M.

TITLE: Ordering and the Energy of Magnetic Anisotropy in Alloys of the Permalloy Class (Uporyadocheniye i energiya magnitnoy anizotropii v splavakh permalloynogo klassa)

PERIODICAL: Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, 1956, Nr 15, pp 33-52

ABSTRACT: The change in the energy of magnetic anisotropy (MA) in the process of ordering of Ni-Fe base alloys determines the magnetic properties of these alloys to a significant degree. A determination of the first MA constant K_1 was made in terms of the magnitude of the mechanical moment acting upon a single-crystal sphere in a powerful magnetic field. The saturation value of all these alloys was also measured, and in some cases, their magnetostriction. The investigation was conducted with binary Ni-Fe alloys containing 43.84-90.9 atomic % Ni, and with Ni-Fe alloys containing Cr and Mo. The required degree of ordering (from 0 to 1) was obtained in the alloys by means of appropriate heat treatment. K_1 was determined in an anisometer housed in a

Card 1/2

137-58-1-1549

Ordering and the Energy of Magnetic (cont.)

special electromagnet with shell-type cores providing a 12,000-oersted field with a 90-mm air gap. K_1 was determined to an accuracy of 1-3%. The saturation value was determined on the same specimens by the ballistic method, in a 1,000-oersted field, with an accuracy of 1%. The greatest variation in K_1 during the ordering process was found in an alloy of the composition Ni_3Fe, where it varied from 0 (disordered state) to $-4 \cdot 10^4$ erg/cm^3 (the ordered state). As ordering advanced, the content corresponding to $K_1=0$ shifted from 71.5 to 58 atomic % Ni. For Ni-Fe alloys alloyed with Cr it is shown that in addition to the existing industrial chrome permalloy, having highly magnetic properties in the disordered state, there is an entire range of alloys of various contents with similarly pronounced properties appearing at various degrees of order (all the way to 1). The same thing is apparently true for the Ni-Fe-Mo alloys.

P. S.

1. Alloys--Magnetic properties 2. Alloys--Heat treatment 3. Alloys--Test methods 4. Alloys--Test results

Card 2/2

PUZEY I.M.

LYASHCHENKO, B.G.; LITVIN, D.F.; PUZEY, I.M.; ABOV, Yu.G.

Neutron diffraction examination of nickel-iron alloys of the permalloy group. Kristallografiia 2 no.1:64-73 '57. (MIRA 10:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

(Permalloys) (Neutrons--Diffraction)

PUZEY I M

AUTHOR: Puzey, I. M. 48-8-7/25

TITLE: Temperature Dependence of the Energy of Magnetic Anisotropy in Nickel (Temperaturnaya zavisimost' energii magnitnoy anizotropii v nikele).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 8, pp. 1088-1093 (USSR)

ABSTRACT: At the outset a number of papers on this field, are referred to, and it is stated, that these papers are not always consistent. The object of this investigation was therefore, to examine the problem of the temperature dependence of the anisotropic magnetic energy in nickel at thigh as well as at low temperatures. Monocrystals were used as samples, which were obtained by slow cooling of the charge from the high frequency vacuum furnace. It contained 99'8 % Ni, 0,035 % Co, 0,008 % Fe, 0,02 % Cu, 0,009 % S, 0,03 % C and 0,001 % Pb. It was shaped into a spherical form with a diameter of about 9 mm. The samples were subjected to annealing at 1000°C during 4 hrs, with subsequent slow cooling together with the furnace. For the measurements anisometers were used, the construction

CARD 1/3

Temperature Dependence of the Energy of Magnetic Anisotropy in Nickel 48-8-7/25

of which is detailed here. An electro magnet weighing 3'5 t of special construction was employed to furnish strong and uniform fields, having a diameter of 830 mm. The anisotropy constant was computed from the mechanical moment which acted on a given surface of the sample at known temperatures in 24 positions of the field, varying from 15 to 15°. The computation was executed with the help of Bessel functions. The final exactitude is considered to be 0,3 %. The section: results and their application contains a table of the dependence of the anisotropy constants on temperature and the magnetic field. It is stated, that the results do not always correspond with the data of other authors, which is explained by the fact, that these authors used different samples and worked with fields not sufficiently strong. A paper is referred to, which has recently been published by Tyablikov and Gusev and where a so-called polar metal model is employed for the quantum mechanical computation of the dependence of the constants of magnetic anisotropy of cubic crystals on

CARD 2/3

Temperature Dependence of the Energy of 48-8-7/25
Magnetic Anisotropy in Nickel

temperature and the field strength. Taking into consideration the symmetry of the lattice an approximative expression for the Hamiltonian is derived. The corresponding sum and the free energy is computed with the method of repeated quantization. By factorising the free energy into the vectors of the direction cosines of the final magnetised system the formula for the first anisotropy constant is obtained. There are 5 figures, 1 table and 11 references, 9 of which are slavic.

ASSOCIATION: Institute for Precision Alloys TsNIIChM (Institut pretsizionnykh splavov TsNIIChM).

AVAILABLE: Library of Congress

CARD 3/3

PUZEY I. M.

48-8-8/25

AUTHOR: Puzey, I. M.

TITLE: Superstructure and the Temperature Dependence of the Anisotropic Magnetic Energy in Nickel-Iron Alloys (Sverkhstruktura i temperaturnaya zavisimost' energii magnitnoy anizotropii nikel'-zheleznykh splavov).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 8, pp. 1094-1104 (USSR)

ABSTRACT: The concept of order and disorder plays an important role in the magnetic interaction in alloys, which are constituted by atoms with differing magnetic moments which results in the anisotropy of their magnetic properties. Nickel-iron alloys display the property of ordering themselves with respect to the thermic "history", which is an interesting problem for research, in particular, because these alloys are very frequently used for technical purposes. The present paper had as its object the determination of the temperature dependence of the anisotropic energy of binary alloys Ni-Fe and of the relation between the anisotropic energy of certain

CARD 1/4

Superstructure and the Temperature Dependence of the Anisotropic Magnetic Energy in Nickel-Iron Alloys 48-6-8/25

alloys (alloyed with molybdenum, chromium and copper) and their "ordering line".
The samples consisted of spherical monocrystals, which were drawn from the charge of a vacuum furnace and were subjected to slow cooling. The samples were taken from the following materials:

1. Ni-99,88 %, C-0,03 %, rest content - Co, Fe, Cu;
2. Fe-99,81 %, C-0,02 %, Cu-0,04 %, Mn-0,05 %;
3. Mo - 99,36 %, Fe - 0,6%;
4. FeCr; Cr-69,9 %, Si-0,14 %, C-0,07, rest content-Fe
5. Cu - (electrolytic copper)

The samples were first subjected to anetching treatment and then annealed in the furnace at 1000°C for 3 hrs and finally cooled down together with the furnace. An X-ray examination proved them to have normal crystal structure. The degree of order was determined by a neutron scattering method. Here the reflexion of scattered neutrons at crystallographic planes produced narrow or wide maxima.

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Superstructure and the Temperature Dependence 48-8-8/25
of the Anisotropic Magnetic Energy in Nickel-Iron Alloys

A narrow maximum corresponds to a monocrystallinic sample, a wide maximum, however, indicates, that the sample consists of fragments. The remaining part of the paper consists of 5 sections with the headings:
Results from the investigations and their interpretation. Neutronographic examinations. Investigation of the energy of magnetic anisotropy. Discussion of the results. Determination of a temperature-stable alloy. The final conclusions of the paper are:
1) As a result from the investigations by means of neutron scattering on binary alloys Ni-Fe with an admixture of Mo, Cr and Cu the degree of ordering after an adequate thermic treatment of the samples was determined as well as the dependence of this degree on the annealing temperature of the Ni_3Fe samples and the relation between this degree and the anisotropy constant.
2) The relation between the magnetic anisotropy and the annealing temperature of the Ni_3Fe samples was determined.

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Superstructure and the Temperature Dependence of the Anisotropic Magnetic Energy in Nickel-Iron Alloys 48-8-8/25

It was determined, that the dependence of the anisotropic energy on temperature in the disordered state of the samples is of anomalous character.

3) The dependence of the magnetic anisotropy energy of the molybdenum permalloy on the annealing temperature and on the experimental temperature shows an anomalous character.

4) The dependence of the magnetic anisotropy energy of alloys with chromium content on the annealing temperature was determined.

5) On the analysis of the temperature dependence of the anisotropy constant its anomaly was established.

6) The efficiency of the method proposed here for a stabilizing treatment of molybdenum permalloy was proved experimentally.

There are 11 figures, 2 tables and 9 references 7 of which are Slavic.

ASSOCIATION: Institute for Precision alloys TsNIIChM (Institut pretsizionnykh splavov TsNIIChM)

AVAILABLE: Library of Congress

CARD 4/4

PUZEY, I. M.
(Cont. Sci. Res. Inst. Iron Metallurgy, Moscow)

"Studies of the Dynamics of the Domain Structure in a Frequency Range of up to Several mhz."

paper presented at the All-Union meeting on Magnetic Structure of Ferromagnetics June 1958, in Krasnoyarsk. Meeting sponsored by Inst. of Physics, Acad. Sci. USSR, and Comm. for Magnetism, Dept Phys-Math Sci, AS USSR, PUZEY, I. M., Cand. Phys. and Math. Sci.,

"Neutron Diffraction Study of Permalloy-type Iron-Nickel Alloys, with Lyashchenko, B. G.; Litvin, D. F.; and Abov, Yu. G., Cand. Phys. and Math. Sci., page 397.

In book Problems of Physical Metallurgy, Moscow, Metallurgizdat, 1958, 603p. (Its: Sbornik trudov, v. 5)

The articles in the book present results of investigations conducted by the issuing body, Inst. of Physical Metallurgy, a part of the Cent. Sci. Res. Inst. of Ferrous Metallurgy, located in Dnepropetrovsk. The investigations were concerned with phase transformations in alloys, strengthening and softening processes, diffusion processes (studied with the aid of radioactive isotopes), and certain other questions.

70-3-2-3/26

AUTHORS: Lyashchenko, B.G., Litvin, D.F., Puzey, I.M., Abov, Yu.G. and Golovkin, V.S.

TITLE: Investigation of the Defect Structure of Metallic Monocrystals by a Neutron Diffraction Method (Izucheniye defektnoy struktury metallicheskikh monokristallov neytronograficheskim metodom)

PERIODICAL: Kristallografiya, 1958, Vol.3, Nr 2, pp 148 - 154 (USSR).

ABSTRACT: A neutronographic investigation of the fragmentary structure of single crystals of nickel alloys has been made and the effect of this structure on the character and intensity of the scattered neutron beams is demonstrated. A short review of work on the neutronographic investigation of the structures of synthetic single crystals is included.

One of the consequences of the low absorption of neutrons in most materials is the importance of secondary extinction. Bacon has shown that, for X-ray formulae to apply, the dimensions of a single mosaic crystal should be proportional to the width of the Darwin curve (angular distribution of the mosaic blocks). For KBr with a Darwin width of less than 3' this limiting thickness is 1.5 - 2 mm. The effect of volume defects of dimensions greater than those of the mosaic blocks is of interest and

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Investigation of the Defect Structure of Metallic Monocrystals by a Neutron Diffraction Method

leads to the break-up of diffraction spots into small patches. 14 specimens of monocrystals have been examined. They were alloys of Ni and Fe with different quantities of Mo, Cr and Cu. The spherical specimens were etched with a mixture of nitric and hydrochloric acids and vacuum annealed for 4 hours at 750 °C. The orientation of the crystals could be seen from the etch patterns. Finer orientation was achieved with a magnetic method to 1-2°. The spheres were finally polished so that the maximum differences in diameter were less than 1 μ in 7-12 mm. The axes were marked on the surface with gold spots electrolytically deposited. The composition was checked on sliced-up specimens. Investigations were carried out on the single-crystal neutron spectrometer of the Ac.Sc. USSR, the method being similar to that used by Lowde. The accuracy of the intensity measurements was about 1%.

Most specimens showed anomalous reflection curves. Contour plots were made of various reflections. Diagrams for the 020 reflection of two Ni-Fe alloys are reproduced. For one specimen, there was a difference amounting to a factor of 2.5 between the intensities of reflections hkl and $\overline{hkl}$. Investigating

Card2/3 this effect, a small slit was scanned across the diffracted

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Investigation of the Defect Structure of Metallic Monocrystals by a Neutron Diffraction Method

beam. The effect was shown not to be due to multiple diffraction. X-ray investigation of the specimen disclosed appreciable boundary regions separating fragments disoriented by up to 20'. This caused the reflections 222, $2\bar{2}2$, $\bar{2}22$ and $\bar{2}22$ to come only from one fragment and $\bar{2}\bar{2}\bar{2}$, $\bar{2}2\bar{2}$, $2\bar{2}\bar{2}$ and $22\bar{2}$ to come from the other.

There are 5 figures, 1 table and 13 references, 4 of which are Soviet, 9 English.

ASSOCIATION: Institut metallofiziki (Institute of Metal Physics)

SUBMITTED: June 3, 1957

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SOV/137-58-9-19764

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 236 (USSR)

AUTHORS: Lyashchenko, B.G., Litvin, D.F., Puzey, I.M., Abov, Yu.G.

TITLE: Neutron-diffraction Study of Iron-nickel Alloys of the Permalloy Class (Neytronograficheskoye issledovaniye zhelezonikilevykh splavov permalloynogo klassa)

PERIODICAL: Sb. tr. In-t metalloved. i fiz. metallov Tsentr. n.-i. in-ta chernoy metallurgii, 1958, Vol 5, pp 397-418

ABSTRACT: Bibliographic entry. Ref. RZhMet, 1958, Nr 4, abstract 8080

1. Iron-nickel alloys--Electron diffraction analysis

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SOV/48-22-10-7/23

AUTHOR: Puzey, I. M.

TITLE: Temperature Stabilization of the Magnetic Properties of Alloys (Temperaturnaya stabilizatsiya magnitnykh svoystv splavov)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1194 - 1199 (USSR)

ABSTRACT: The magnetic properties of ferromagnetic materials are to a considerable degree dependent on temperature. The temperature dependence of the permeability as well as of the coercive force is caused above all by the temperature dependence of the constants of magnetic anisotropy and of magnetostriction. Anisotropy has a particularly strong influence as it is capable to vary within a wide interval with varying temperature. Magnetostriction on the other hand varies much less. In the previous work (Ref 1) the author proved the possibility of stabilizing the magnetic properties of Mo-permalloy at varying temperature. In the present work it was found that when using the specific temperature dependence of the energy of anisotropy this method can be extended to many weakly magnetic alloys. The methods of measuring the magnetic anisotropy of monocrystal samples have been

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described already in reference 1. The investigation of the temperature dependence of the constant of the magnetic anisotropy of alloys near their isotropic state as a rule shows that in a certain temperature range a decrease of this constant can be observed. As with the degree of ordering in the alloy, the concentration of the magnetically isotropic alloy shifts towards iron, apparently also the reciprocal temperature dependence shifts in the same range of concentration. The discovery and investigation of the reciprocal temperature dependence of the energy of magnetic anisotropy permitted to work out a method of temperature stabilization of the magnetic properties of alloys. As proceeds from paper mentioned in reference 1, it has been shown that alloys in a state near the magnetically isotropic state, i.e. at low values of the energy of anisotropy, may exhibit a specific temperature dependence of the constant of magnetic anisotropy. This fact permits to stabilize their magnetic properties with respect to temperature. The number of such alloys is high, especially in the system Ni-Fe-Co. This number can still be increased if the ordering capability of the alloys is utilized. For this reason the suggested method seems to be applicable to a high number of alloys. There are 8 figures, 2 tables, and 6 references, 6 of which are Soviet.

AUTHORS: Puzey, I. M., Molotilov, B. V. SOV/48-22-10-15/23

TITLE: Magnetostriction in Nickel-Iron-Molybdenum Alloys (Magnitostriktsiya splavov nikel'-zhelezo-molibden)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958 Vol 22, Nr 10, pp 1244 - 1250 (USSR)

ABSTRACT: In the present paper the authors investigated the magnetostriction in nickel-iron-molybdenum alloys in relation to the coordination and the temperature. Measurements on polycrystalline samples showed that the zero line after protracted annealing is displaced by the coordination by not more than 1% towards nickel. More complete data on the properties of the magnetostriction may be obtained from measurements on monocrystals. Also in this case a displacement of the zero lines takes place. Vonsovskiy (Ref 4) showed that because of an interaction of different atoms constants may occur in an alloy, the signs of which are independent of the alloy components. The zero lines of polycrystalline alloys (Fig 4) are located as expected between the zero lines of the constants. The zero lines $\lambda_{100} = 0$ and $\lambda_{111} = 0$ in the concentration triangle

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Ni-Fe-Mo permit the exact definition of the position of the μ-domain. The schematic representation of the μ-domain can be seen in figure 2, the accurate one in figure 5. All compositions of the alloys belonging to this domain exhibit physical constants that are suitable for attaining a good permeability. Measurements of the magnetic properties showed that in alloys of the μ-domain they are by about one and a half times larger than in Mo-permalloy. In spite of the small magnetostriction of the examined alloys (of the order 10^{-6}) the investigations of their temperature dependence was successful. The temperature dependence of the magnetostrictive parameters of monocrystals is analogous to that one of polycrystals (Table 3). A temperature increase causes a monotonous decrease of the magnetostriction of the monocrystals as well as of the polycrystals. In the examined alloys a change of the sign could not be observed although the alloys were in the concentration range of the zero values of the magnetostriction. Referring to the paper mentioned in reference 4 a change of the sign of the magnetostrictive constants with varying temperature could be expected if the signs of the constants of the components and of the alloy and the time course of temperature with respect to time are different. At higher temperatures the temperature dependence of magnetostriction of the alloys seems to be governed by the law by Akulov (Ref 1):

$$\lambda_{sT} = \lambda_{so} \left(1 - \frac{T}{\theta}\right)$$

θ denotes the Curie (Kyuri) temperature.
In the data found a certain deviation from the linearity is explained by the process of coordination taking place during the measurements at elevated temperatures. There are 5 figures, 3 tables, and 6 references, 5 of which are Soviet.

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